

NSCMP Mission Statement

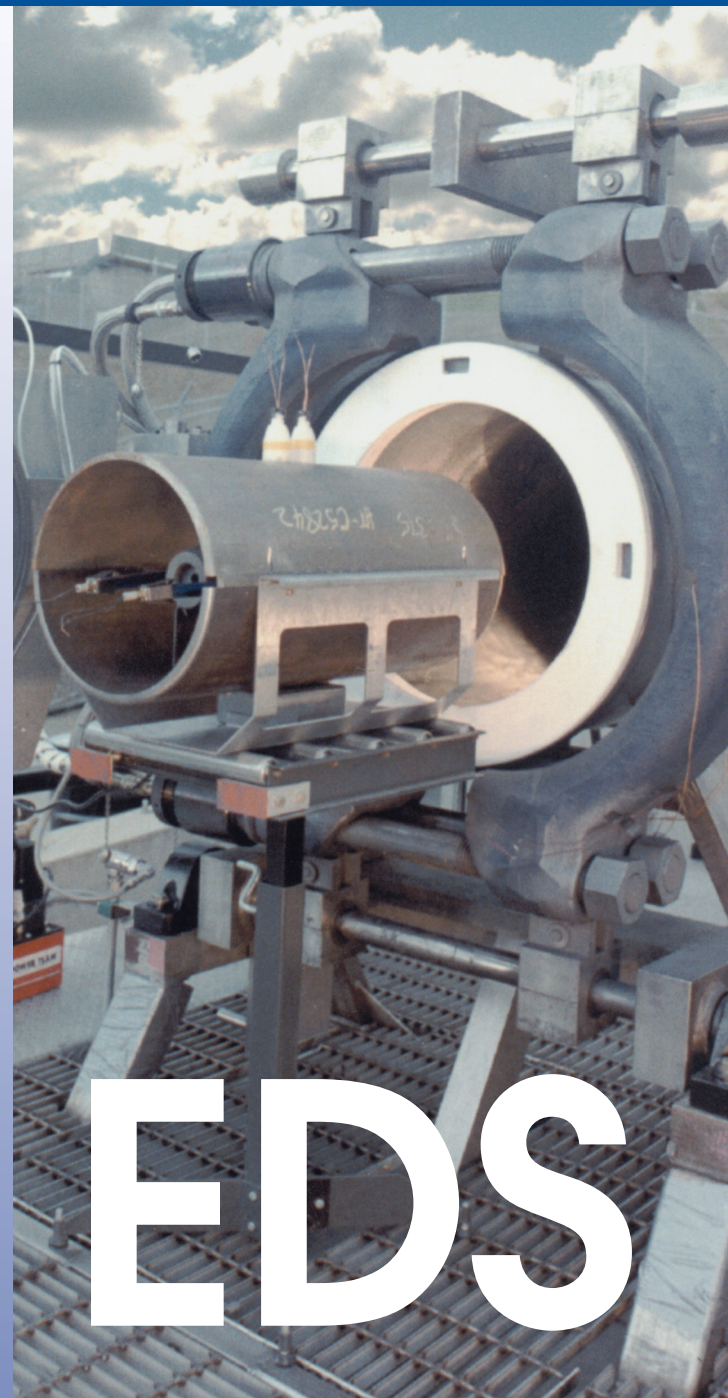
The Non-Stockpile Chemical Materiel Project (NSCMP), which is under the U.S. Army Program Manager for Chemical Demilitarization (PMCD), was established to provide centralized management and direction to the Department of Defense for the disposal of non-stockpile chemical materiel in a safe, environmentally sound, and cost-effective manner. Specifically, the Product Manager for Non-Stockpile Chemical Materiel is charged with:

- identifying the type and location of chemical warfare materiel requiring destruction
- researching, developing, and testing chemical warfare materiel destruction technologies
- destroying former chemical weapons production facilities and related equipment
- supporting the Chemical Weapons Convention treaty obligations

For more information, please call the Public Outreach and Information Office for the Program Manager for Chemical Demilitarization at: (800) 488-0648 or visit our web site at:
www-pmcd.apgea.army.mil



Explosive Destruction System



EDS

What is the Explosive Destruction System (EDS)?

The EDS is a transportable treatment system designed to destroy explosively configured World War I and World War II era munitions at a recovery site, such as the 75mm artillery shell, the 8-inch Livens projectile, and the 4.2-inch mortar shell. The EDS can be used to safely detonate chemical munitions and neutralize the associated chemical agents, without venting.

Why was the EDS developed?

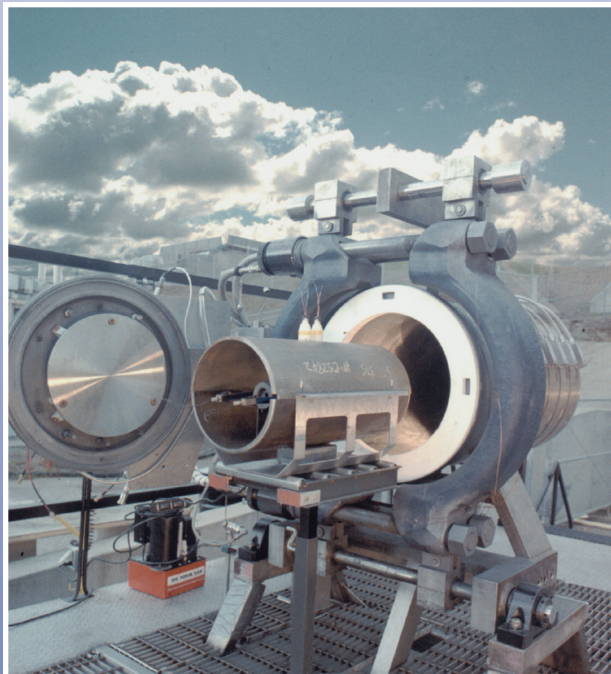
The EDS is the U.S. Army's response to the need for destruction of chemical warfare materiel that may not be safe to transport or place in long-term storage. The EDS is an innovative alternative to the open detonation of explosively configured munitions.



What are the major components of the EDS?

The two major components of the EDS are the containment vessel and the fragment suppression system. The containment vessel is a 50-gallon stainless steel vessel in which munitions will be destroyed. This vessel is designed to withstand a total explosive force equal to approximately one pound of dynamite. Due to its stainless steel construction and corrosion resistance, the containment vessel can be used to treat a wide variety of munitions and chemical agents.

The EDS contains a fragment suppression system that absorbs the impact from exploding munitions and allows the containment vessel to withstand hundreds of detonations before the vessel has to be replaced. Also included are three 25-gallon containers for water and neutralizing reagents, and a hydraulic oscillation sub-system that are used during the neutralization process.



How does the EDS operate?

1. Commercial explosives are placed on the recovered chemical munition, which is then placed inside the containment vessel and sealed.
2. The commercial explosives are remotely detonated. This opens the outer casing of the munition. The containment vessel prevents the release of metal fragments and chemical agent into the environment.
3. Neutralizing reagents (chemicals that react with the agent to form a less toxic substance) are then pumped into the containment vessel where they will react with the munition's chemical agent.
4. Vessel heaters are turned on and the hydraulic oscillation sub-system mixes the reacting chemicals to ensure complete neutralization.
5. The resulting liquid is drained into drums for eventual disposal at a permitted facility.
6. After detonation, the air inside the containment vessel is filtered using a carbon filter before being released into the environment.

